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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,500	09/23/2003	Chung-hum Baik	45340	1919

7590 01/11/2007
Roylance Abrams Berdo & Goodman
6th Floor
1300 19th Street, NW
Washington, DC 20036

EXAMINER

DAVIS, DAVID DONALD

ART UNIT	PAPER NUMBER
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2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/667,500	BAIK ET AL.	
	Examiner	Art Unit	
	David D. Davis	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Prosecution Application

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 26, 2006 has been entered.

Election/Restrictions

2. Claims 19 and 20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on November 7, 2005

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1, 3, 9, 11, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Suwa et al (US 4,891,726). As per claims 1 and 9, Suwa et al shows in figure 4 a head drum assembly for a tape player/recorder. The assembly includes a rotary drum 10, which rotatably supports magnetic head 3 for recording and reproducing information. Shaft 1 engages a central axial bore of drum 10. Fixed drum 2 is fixedly mounted onto a lower part of the shaft 1 parallel to the rotary drum 10. Figure 4 of Suwa et al shows a motor stator provided in fixed drum 2. Motor rotor 21 is provided opposite stator 25. Motor rotor 21 includes a rotor case 23 and a rotor magnet 22 attached directly to case 23 and a rotor magnet 22 attached directly to the rotor case 23..

The rotary drum 10 includes an inner surface facing shaft 1 and an outer circumferential surface opposite the inner surface. Case 23 is directly bonded to the outer circumferential surface of the rotary drum 10.

As per claims 3 and 11, figure 4 of Suwa et al shows the motor stator including a magnetic yoke and a stator coil 25 with a substantially constant gap maintained between the motor rotor 21 and the motor stator. As per claims 17 and 18, Figure 1 of Kazama et al also shows in figure 1 a fixed drum 3 press-fitted onto the lower part of a shaft 1.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 2, 4-8, 10 and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suwa et al (US 4,891,726). Suwa et al discloses the claimed invention. See description *supra*.

Also, Suwa et al shows in figure 4 a rotor magnet 18 with a magnetizing force of the rotor magnet 18 is controlled. Additionally, Suwa et al shows in figure 4 that the magnetic force of the rotor magnet 18 is controlled to be lower than a conventional motor stator.

However, Suwa et al is silent as to the substantially constant second gap being in the range of 0.3 mm to 0.4 mm such as 0.36 mm and the substantially constant first gap is within the range of 0 to 0.03 mm.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to specify the distance of gaps in the head drum assembly of Suwa et al. The rationale is as follows: the purpose of the gaps is to allow rotation of the head drum assembly. The gaps in the head drum assembly need not be in the range of 0.3 mm to 0.4 mm (i.e. 0.36 mm) or 0 to 0.03 mm. Realizing this, one of ordinary skill in the art at the time the invention was made would have been motivated to specify that the gaps were in the range of 0.3

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mm to 0.4 mm (i.e. 0.36 mm) or 0 to 0.03 mm, which is well within the purview of a skilled artisan and absent an unobvious result, so as to effectively optimize the distance

Response to Arguments

9. Applicant's arguments filed October 19, 2006 have been fully considered but they are not persuasive. Applicant's assert that in the second full paragraph on page 3 the following:

In contradistinction to Applicant's claims 1 and 9, Suwa does not disclose, teach or suggest bonding a rotor case directly to the outer circumferential surface of the rotary drum whose inner surface faces the shaft. Instead, in Suwa, cylindrical section 24 of rotor yoke 23 of the electric motor 21 is fitted to the lower side of shoulder 12.

The above statement is curious because Suwa clearly shows in figure 4, contrary to applicant's assertions, Suwa does disclose, teach, suggest and show bonding rotor case 23 directly to the outer circumferential surface of the rotary drum. Additionally, section 24 of rotor case 23 is a part of rotor case 23. It is not a separate detached portion as suggested by applicant.

With respect to the third full paragraph on page 3, whether or not Suwa describes a section in detail with respect to figure 1 is moot. Suwa shows the claimed invention in figure 4.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

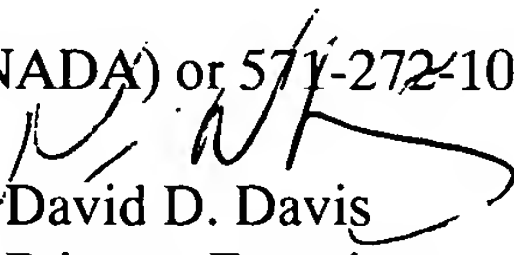
MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Davis whose telephone number is 571-272-7572. The examiner can normally be reached on Monday thru Friday between 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on 571-272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


David D. Davis
Primary Examiner
Art Unit 2627

ddd